

Access DB# 92264

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Michael C. Missinger Examiner #: 75784 Date: 4/23/03  
 Art Unit: 1772 Phone Number 301-58915 Serial Number: 101021813  
 Mail Box and Bldg/Room Location: 11A15 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: shell article construction  
 Inventors (please provide full names): Cohen Wayne

Earliest Priority Filing Date: 12/14/2000

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

## STAFF USE ONLY

Searcher: <u>Koppe RM</u>	Type of Search	Vendors and cost where applicable
Searcher Phone #: <u>305 3542</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Location: <u>E1C 1700</u>	AA Sequence (#) _____	Dialog _____
Date Searcher Picked Up: <u>4/29/03</u>	Structure (#) _____	Questel/Orbit _____
Date Completed: <u>4/30/03</u>	Bibliographic <u>✓</u>	Dr.Link _____
Searcher Prep & Review Time: <u>30min</u>	Litigation _____	Lexis/Nexis _____
Clerical Prep Time: _____	Fulltext _____	Sequence Systems _____
Online Time: <u>1.45min</u>	Patent Family _____	WWW/Internet _____
	Other _____	Other (specify) _____

provided with the outlet orifice (53) and an occluding end wall (55), there projects a hollow conductive member (23) which bears in sealing-tight manner on the intermediate wall (27) and which jointly with lateral limiting walls or inner walls (59, 60) which are integrally formed or bear in sealing-tight manner on the inside face (55') of the end wall (55) a paste stowage space (93) provided with the outlet orifice (53) and which is connected by at least one paste conducting passage (91) to the paste orifice (38, 39, 38', 39') in the intermediate wall (27); whereby the conductive member (23) is provided with a resilient diaphragm wall (80) opposite the outlet orifice (53) and which comprises in the centre of its area and coaxial with the axis (54) of the outlet orifice (53) a stopper-like closure member (82) for the outlet orifice (53).

Dwg.1/17

AN 1993-289604 [37] WPIX  
 DC A96 P42  
 IC ICM B05B011-00; F04B009-14  
 ICS B05C017-005; B65D047-34; B65D083-76; F04B019-00  
 MC CPI: A12-H; A12-P06  
 PLC UPA 19931202  
 KS: 0231 2751 2775 2781 2791 3258

FG: \*001\* 017 04- 289 381 50& 50- 623 629 651 652 723 727

PLE UPA 19931202  
 [1.1] 017; P0000  
 [1.2] 017; Q9999 Q7976 Q7885; Q9999 Q8457 Q8399 Q8366; Q9999 Q8435  
 Q8399 Q8366; Q9999 Q8571 Q8366; Q9999 Q7250; K9416; ND01

L7 ANSWER 30 OF 55 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 1992-425534 [52] WPIX  
 DOC. NO. NON-CPI: N1992-324686  
 TITLE: Roller-shutter curtain assembly - has supporting members with hinges pressed or moulded into pressed or moulded wooden slats.  
 DERWENT CLASS: Q48  
 INVENTOR(S): HAUBENWALLNER, G; RANKL, G  
 PATENT ASSIGNEE(S): (RANK-I) RANKL G  
 COUNTRY COUNT: 8  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 519289	A1	19921223	(199252)*	GE	6
R: DE ES FR GB GR IT					
DE 4120424	A1	19921224	(199301)		
CA 2071645	A	19921221	(199316)		
DE 4120424	C2	19940105	(199401)		4
US 5343922	A	19940906	(199435)		5
EP 519289	B1	19950215	(199511)	GE	6
R: DE ES FR GB GR IT					
DE 59201386	G	19950323	(199517)		
ES 2071380	T3	19950616	(199531)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 519289	A1	EP 1992-109619	19920606
DE 4120424	A1	DE 1991-4120424	19910620
CA 2071645	A	CA 1992-2071645	19920619
DE 4120424	C2	DE 1991-4120424	19910620
US 5343922	A	US 1992-901598	19920619
EP 519289	B1	EP 1992-109619	19920606
DE 59201386	G	DE 1992-501386	19920606
		EP 1992-109619	19920606
ES 2071380	T3	EP 1992-109619	19920606

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 59201386	G Based on	EP 519289
ES 2071380	T3 Based on	EP 519289

PRIORITY APPLN. INFO: DE 1991-4120424 19910620

AN 1992-425534 [52] WPIX

AB EP 519289 A UPAB: 19931006

The curtain for a roller-shutter comprises slats with supporting **members** incorporating hinge portions by which they are joined together. The slats (1-3) are of pressed or moulded **wood**, while the **members** (4-6) are moulded or pressed into them.

Recesses can be formed in the **members**, some of them along the edge adjacent to the hinge. There can be a **separate** supporting **member** along each lengthwise edge of a slat, and adjacent hinge sections can be coupled via an intermediate link. The hinge can have hook-section grooves deep enough to bring the edges of adjacent slats into contact.

USE/ADVANTAGE - Proof against forced entry and usable with conventional roller-shutter components. ( 1,3,4/5)  
1,3,4/5

ABEQ DE 4120424 C UPAB: 19940217

The slats (1,2,3) are made from pressed or cast **wood** mass and the bearers (4,5,6) are slotted (11) out to enable the respective longways slat edges to reach through the slots to the bearer hinge **parts** (7). Each longitudinal edge of the slat has its own bearer and the slats themselves are **hollow** and the hinge **parts** (7,8) on two adjoining slats are connected to one another by means of an adapter.

The adapter has two hinge sectors which, like the main bearer hinge **parts**, are in hook form. Thus when the shutter is pulled **part** way up, the slots (11) in the underlying slat are exposed and when lowered the bearer slotted (11) **parts** (12) enter the hooked (8) and trough (9,10) **part** of the bearer and are thus closed off.

USE/ADVANTAGE - Window accessories. Pressed **wood** slats are

more responsive than plastics etc. and fit in with general house furnishing style, using hinge and slot connections for firm shutter unit.

Dwg.1/5

ABEQ US 5343922 A UPAB: 19941021

The slatted curtain comprises plural slats, the slats having carrier elements that have joint portions for interconnecting the slats. The slats are formed from compressed or cast wood material.

The carrier elements are cast or pressed into the wood material and have plural recesses, at least one of the recesses being positioned along at least one longitudinal free edge of the wood material and defining means for anchoring the wood material to the respective carrier element along the at least one longitudinal free edge. A ventilation member permits light and air to pass between adjacently disposed pairs of the slats.

USE - For roller blinds.

Dwg.1/5

ABEQ EP 519289 B UPAB: 19950322

A slatted curtain for roller blinds wherein the slats (1,2,3) are provided with carrier elements (4,5,6,14,15) that have joint portions (7,8) for interconnecting the slats (1,2,3), the slats (1,2,3) being formed of a pressed or cast material, and the carrier elements (4,5,6,14,15) being pressed or cast into the material, characterised in that the material is a wood material and the carrier elements (4,5,6,14,15) have recesses (11,13).

Dwg.1/5

AN 1992-425534 [52] WPIX

DC Q48

IC ICM E06B009-08; E06B009-15; E06B009-165

L7 ANSWER 31 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1992-208578 [26] WPIX

CROSS REFERENCE: 1992-133789 [17]

DOC. NO. NON-CPI: N1992-158142

DOC. NO. CPI: C1992-094713

TITLE: Tampon plastic applicator - has slidable pusher held within hollow handle by predetermined break point.

DERWENT CLASS: D22 P32

INVENTOR(S): SCHOELLING, H W

PATENT ASSIGNEE(S): (MCNI) MCNEIL-PPC INC

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
AU 9185913	A	19920430	(199226)*		11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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AU 9185913 A

AU 1991-85913 19911016

PRIORITY APPLN. INFO: DE 1990-14484U 19901018

AN 1992-208578 [26] WPIX

CR 1992-133789 [17]

AB AU 9185913 A UPAB: 19950712

Tampon (14) **plastic** applicator (10), has at one end a **hollow** handle (16) of smaller dia. than the applicator body (12), and within the handle (16) is a slidable pusher (18) held in place by at least one predetermined break point (24).

Pref. the pusher has an enlarged head (32) having a rearward shoulder (34) secured to the handle (16) by the break point (24). Pref. the handle (16) forward end snap-fits into the applicator body (12) rear end by interengaging beads (54-56).

ADVANTAGE - Body and handle **parts** are simple **separate** injection mouldings.

1/2

Dwg.1/2

AN 1992-208578 [26] WPIX

DC D22 P32

IC ICM A61F013-32

MC CPI: D09-C02

L7 ANSWER 32 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1992-056091 [07] WPIX

DOC. NO. NON-CPI: N1992-042753

TITLE: Bag carrier handle - includes inner core in form of rigid tube defining central **hollow** space with open ends.

DERWENT CLASS: P24 Q32

INVENTOR(S): BYSTROM, A P; BYSTROM, B L

PATENT ASSIGNEE(S): (BYST-I) BYSTROM B L

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5083825	A	19920128	(199207)*		

PRIORITY APPLN. INFO: US 1990-504819 19900405

AN 1992-056091 [07] WPIX

AB US 5083825 A UPAB: 19931006

The handle includes an inner core in the form of a substantially rigid tube defining a central **hollow** space with open ends. The tube is divided into two longitudinally extending parts, the length having a pair of spaced junction lines between them. The handle also includes a flexible, resilient elongated outer **shell** having a **hollow** interior and a split line the entire length.

The shell is fixedly secured to the outer surface of the core parts

and is releasably openable at the split line to **separate** the **parts** at one of the junction lines for access to the central space in order to releasably dispose the bag carrier strap in it. The outer shell may be of elastomeric material and the inner core may be of metal, wood, **plastics** or the like. A closure releasably holds the handle shut. The closure may be a first hook pile strip on the inner surface of the outer shell and a second such strip on the outer surface of the inner core connectable therewith. Alternatively, the two hook pile splits may be positioned on the outer surface of the outer shell on opposite sides of the split line and be capable of bridging it.

USE - The improved handle is for a bag or bag carrier and has provision for the insertion of a bag strap inside and for the releasable removal.

1/7

AN 1992-056091 [07] WPIX  
DC P24 Q32  
IC A45C013-26; B65D033-06

L7 ANSWER 33 OF 55 WPIX (C) 2003 THOMSON DERWENT  
ACCESSION NUMBER: 1991-317340 [43] WPIX  
DOC. NO. NON-CPI: N1991-243173  
TITLE: Tethered golf ball - uses tether made of joined resilient and non-resilient line with resilient **part** made of **plastics** coil or elastic strap.  
DERWENT CLASS: P36  
INVENTOR(S): SOLOMAN, B R  
PATENT ASSIGNEE(S): (SOLO-I) SOLOMON B R  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
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US 5054786	A	19911008	(199143)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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US 5054786	A	US 1990-533273	19900604

PRIORITY APPLN. INFO: US 1990-533273 19900604

AN 1991-317340 [43] WPIX

AB US 5054786 A UPAB: 19930928

The golf sling uses a tether made up of a joined resilient and non-resilient line. The elastic portion of the tether is formed of material having a circular shaped cross-section fabricated into a coil shape having a series of uniform sized loops which advance along a centre from loop to loop. The coil has two **separate parts**, an outer coiled **part** made of **plastics** having a **hollow** interior extending along the length of the coil, and an inner **part** made of coiled spring metal.

The inner part is dimensioned and fabricated such as to fit within the hollow interior whereby the coiled spring metal and plasticse provide a wide array of spring and damping characteristics, respectively.

USE - In golf practice apparatus of the type having a golf ball attached to an anchor by a tether having an elastic portion. Esp. permitting practicing of golf in a limited area.

2/7a

AN 1991-317340 [43] WPIX  
DC P36  
IC A63B069-36

L7 ANSWER 34 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1990-024092 [04] WPIX

DOC. NO. NON-CPI: N1990-018449

TITLE: Reciprocal, gas spring bellows support piston - is made of fibre reinforced plastics in pot shape with cylindrical jacket.

DERWENT CLASS: P62 Q12 Q56 Q63

INVENTOR(S): FROHLKE, M; KOSCHINAT, H; FROEHLKE, M; KOSCHINAT, H B; KOSCHINAT, B H

PATENT ASSIGNEE(S): (SAUE-N) SAUER ACHSENFAB KEILBURG OTTO

COUNTRY COUNT: 18

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 351678	A	19900124	(199004)*	GE	12
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 3824542	A	19900125	(199005)		
US 4890823	A	19900102	(199009)		7
DE 3824542	C	19900906	(199036)		
HU 53948	T	19901228	(199107)		
US 5060916	A	19911029	(199146)		
HU 207014	B	19930301	(199313)		
EP 351678	B1	19931215	(199350)	GE	16
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 58906416	G	19940127	(199405)		
CA 1327054	C	19940215	(199412)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 351678	A	EP 1989-112535	19890708
DE 3824542	A	DE 1988-	19880720
US 5060916	A	US 1989-414528	19890929
HU 207014	B	HU 1989-3686	19890720
EP 351678	B1	EP 1989-112535	19890708
DE 58906416	G	DE 1989-506416	19890708
		EP 1989-112535	19890708
CA 1327054	C	CA 1989-611730	19890918

FILING DETAILS:

PATENT NO	KIND		PATENT NO
HU 207014	B	Previous Publ.	HU 53948
DE 58906416	G	Based on	EP 351678

PRIORITY APPLN. INFO: EP 1989-112535 19890708; DE 1988-3824542  
19880720

AN 1990-024092 [04] WPIX

AB EP 351678 A UPAB: 19930928

The piston consists of the pot-shaped body (1) with cylindrical jacket (9) and support (11), both made of fibre reinforced **plastics**. The piston has a bottom foot (5) and a top edge (6), leading radially inwards into a trough-shaped section (7) with a base (8), in which is an opening (20) for a bolt (22) for connection to a base (23) in the air spring bellows (24).

The support is a **separate, hollow, frusto-conical member**, with a dia. decreasing from the foot to the base of the trough **part** of the piston. The support has an upper base plate under the trough bottom of the piston.

USE/ADVANTAGE - For commercial vehicle suspensions, with a facility to take up all operational forces.

2b/4

ABEQ DE 3824542 C UPAB: 19930928

A plunger piston (1) which is located between a pneumatic damper bellow and a support element of a car suspension system, includes a cylindrical housing (9). The top end of the housing is closed by an axially stepped end plate (8) which provides the location for the damper bellow.

The tapered piston sleeve (11) includes a central screw hole (19) on its inside end (18) for a coupling bolt on the damper which protrudes through a hole (20) in the housing end plate (8). An external collar (13) on the opposite end of the piston sleeve locates against an internal radial recess (30) on the housing end (5).

ADVANTAGE - Plunger piston assembly for damper bellow location is produced of glass fibre reinforced **plastics**.

ABEQ US 4890823 A UPAB: 19930928

The plunger piston system is made pref. of glass fibre-reinforced **plastic** or similar composite material, with a plunger piston, which has an essentially cylindrical plunger piston skirt with a bottom foot region for the connection with an air spring bearing arm and an upper, pref. essentially semicircular plunger piston edge. This adjoins the plunger piston skirt and which transforms pref. at an angle from the outside inwardly into a trough section that is equipped with a pref. in any event region by region, essentially level trough base, having an opening for the passage of a bolt for a friction lock connection with a base of the air spring bellows.

The bellows form a truncated conical trough for pref. form-locked reception of the convex base of the air spring bellow. To simplify the production and yet improve the stability a supporting **member** designed as a **separate** component is mounted in the cavity



surrounded by the essentially cylindrical plunger piston **shell**. The supporting **member** abut with an upper base plate the under side of the trough base of the plunger piston, and the plunger piston and supporting **member**. abut in their bottom foot region at least at several points distributed over the perimeter of the foot regions.

USE - To support and guide the pneumatic spring bellows of an air suspension axle of a commercial vehicle or the like.

ABEQ US 5060916 A UPAB: 19930928

The plunger piston is for example, to support and guide a pneumatic spring bellows of an air suspension axle of a commercial vehicle. It includes a plunger piston that has a cylindrical plunger piston skirt with a bottom foot region for connection with an air spring bearing arm and an upper plunger piston edge that adjoins the plunger piston edge that adjoins the plunger piston skirt.

A trough section which extends radially inward from the edge has a trough base with an opening for the passage of a bolt for a force-fit connection with a base of the air spring bellows. The trough section defines a trough to accommodate a convex base of the air spring bellows. A supporting body **fits** in an inner space of the plunger piston is surrounded by the skirt.

USE - For vehicle air spring suspensions. @@

ABEQ EP 351678 B UPAB: 19940203

Plunger piston arrangement, for example for the support and guidance of an air spring bellows (24) of an air-suspended utility vehicle axle or the like, having a plunger piston (1) which has a plunger piston skirt (9) with a lower foot region (5), for example for the connection with an air spring bearing arm, and with an upper plunger piston edge (6) which is connected to the plunger piston skirt (9) and turns radially inwards into a trough section (7) with a trough base (8) which is provided with an opening (20) for the passage of a bolt (22) for the force-locking connection with a base (23) of the air spring bellows (24), and which trough section (7) forms a trough (26) for the accommodation of the convex base (23) of the air spring bellows (24), wherein arranged in an interior space (27) surrounded by the plunger piston skirt (9) there is a support body (11) which is supported with its lower foot region (12) at the lower foot region (5) of the plunger piston (1), characterised in that the plunger piston (1) and the support body (11) are made of **plastics** material, preferably glass fibre-reinforced **plastics** material or like composite materials, in that the plunger piston (1) is formed in a pot-shaped manner with a substantially cylindrical skirt (9), in that the support body (11) is formed as a **separate part** having substantially the shape of a hollow truncated cone with a diameter (D) which diminishes from the lower foot region (5) towards the trough base (8) of the plunger piston (1) and in that the support body (11) rests with an upper base plate (18) against the underside (28) of the trough base (8) of the plunger piston (1).

Dwg.2a,b/4b

AN 1990-024092 [04] WPIX

DC P62 Q12 Q56 Q63

IC ICM B60G015-10

ICS B25G003-00; B60G011-26; F04B043-00; F04B045-00; F16F009-05

L7 ANSWER 35 OF 55 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 1989-317934 [44] WPIX  
 DOC. NO. NON-CPI: N1989-241971  
 TITLE: Camshaft for IC engine - is of built-up construction with  
 cams fitting on splined shaft.  
 DERWENT CLASS: P52 P56 Q51 Q61 Q64  
 INVENTOR(S): LESPOUR, J; LESPOUR, J P  
 PATENT ASSIGNEE(S): (VALT-N) VALTUBES  
 COUNTRY COUNT: 12  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 340128	A	19891102	(198944)*	FR	14
R: AT BE CH DE ES GB IT LU NL SE					
FR 2630790	A	19891103	(198951)		
EP 340128	B1	19930303	(199309)	FR	17
R: AT BE CH DE ES GB IT LI LU NL SE					
DE 68905065	E	19930408	(199315)		
ES 2038436	T3	19930716	(199333)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 340128	A	EP 1989-420152	19890426
EP 340128	B1	EP 1989-420152	19890426
DE 68905065	E	DE 1989-605065	19890426
		EP 1989-420152	19890426
ES 2038436	T3	EP 1989-420152	19890426

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 68905065	E Based on	EP 340128
ES 2038436	T3 Based on	EP 340128

PRIORITY APPLN. INFO: FR 1988-6072 19880428

AN 1989-317934 [44] WPIX

AB EP 340128 A UPAB: 19930923

The camshaft is mfd from **separate** component **parts** and consists of a **hollow** shaft (20) which is splined on its outer surface (32,33,34,35). The cams (22,23,24), which are hard faced to prevent wear, each have a splined hole so that the external splines of the shaft match the internal splines of the cams.

The cams are slid onto the shaft, the splines allowing the correct angular orientation of the cams, and when correctly positioned along the shaft, they are held in position by **plastics** deformation of the **metal** of the shaft on either side of the cam by means of upsetting rollers. Pulleys, pinions and bearings can be **fitted** to a shaft in a similar way.

USE - For the mfr of cam shafts for IC engines.

4/9

ABEQ EP 340128 B UPAB: 19930923

A process for the production of a camshaft with one or more cams fitted thereto, wherein a shaft (1,20) and at least one cam (3,12,24) comprising a hole (2,12) whose cross-section corresponds to that of the shaft are used, a sufficient clearance being provided between the walls of the shaft and the hole to be able easily to engage said shaft within said hole and then easily displace the cam to the planned location, and wherein, after having reached said location, said cam is fixed to the shaft, characterised in that, in an annular zone adjacent to one at least of the two ends (11,48,49) of the hole (2,13) in said cam (3,12,24), there is applied to the outside surface of the shaft (1,20) a sufficient pressure to cause plastic deformation of the metal so as to upset at least a part thereof, forming an annular bead (10,36,47) of which at least a portion at least partially fills the clearance between the walls of the shaft and the hole at the end thereof and thus wedges the cam with respect to the shaft, a complementary means being used to reinforce the angular fixing of the cam.

AN 1989-317934 [44] WPIX

DC P52 P56 Q51 Q61 Q64

IC ICM B23P011-00

ICS B21K025-00; F01L001-04; F16B017-00; F16H053-02

L7 ANSWER 36 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1989-208463 [29] WPIX

DOC. NO. NON-CPI: N1989-158953

TITLE: Composite hollow shaft with integral drive members - consists of two types of tubular sections, integral with drive members.

DERWENT CLASS: P52 Q51 Q61 Q62 Q63 Q64

INVENTOR(S): MAUS, W; SWARS, H

PATENT ASSIGNEE(S): (EMIT-N) EMITEC GES EMISSIONSTECHNOL; (EMIT-N) EMITEC GES EMISSION; (EMIT-N) EMITEC GMBH; (EMIT-N) EMITEC GES EMISSIONS TECHNOLOGIE MBH

COUNTRY COUNT: 13

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 324500	A	19890719	(198929)	* GE	5
R: BE CH DE ES FR GB IT LI NL SE					
DE 3800914	A	19890803	(198932)		
BR 8900139	A	19890912	(198942)		
US 4967617	A	19901106	(199047)		
DE 3800914	C	19910801	(199131)		
EP 324500	B	19920408	(199215)		5
R: BE CH DE ES FR GB IT LI NL SE					
DE 58901100	G	19920514	(199221)		
ES 2030216	T3	19921016	(199246)		
KR 9205024	B1	19920625	(199401)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 324500	A	EP 1989-100549	19890113
DE 3800914	A	DE 1988-3800914	19880114
US 4967617	A	US 1989-295302	19890110
EP 324500	B	EP 1989-100549	19890113
DE 58901100	G	DE 1989-501100	19890113
		EP 1989-100549	19890113
ES 2030216	T3	EP 1989-100549	19890113
KR 9205024	B1	KR 1989-325	19890113

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 58901100	G Based on	EP 324500
ES 2030216	T3 Based on	EP 324500

PRIORITY APPLN. INFO: DE 1988-3800914 19880114

AN 1989-208463 [29] WPIX

AB EP 324500 A UPAB: 19930923

The **hollow** shaft (1) with integral drive **members** consists of **separate**, tubular first sections (5) joined to second tubular sections (2,3) with integral cams (2). The two types of the tubular sections are formed by **plastic** moulding of the one into the elastically deformable other one, or by shrinking the one onto the other one.

An intermediate layer (11), made of a material with a high modulus of elasticity is located between the first and second tubular sections.

USE/ADVANTAGE - For camshafts etc., enabling use of different materials of the shaft **parts**.

1/1

ABEQ DE 3800914 C UPAB: 19930923

The **hollow** shaft is **fitted** with driving elements and consists of first and second tubular sectors integrated with these elements. The first sectors (5) should be in ductile material and lie inside as compared with the second sectors (2,3) which lie outside and are made from less flexible material. First and second sectors are forcibly joined to one another using high elasticity sleeve interlayers (11) between the sectors where they overlap.

Pref. the sectors are joined by plastically expanding one inside the elastically deformed other sector, or again by shrinking the one sector onto the other.

USE/ADVANTAGE - Camshafts, etc., engine **parts**. Inner ductile and outer less flexible sectors forcibly joined and with integral cams etc., for reliable drive transfer.

ABEQ DE 58901100 G UPAB: 19930923

The **hollow** shaft (1) with integral drive **members** consists of **separate**, tubular first sections (5) joined to second tubular sections (2,3) with integral cams (2). The two types of

the tubular sections are formed by **plastic** moulding of the one into the elastically deformable other one, or by shrinking the one onto the other one.

An intermediate layer (11), made of a material with a high modulus of elasticity is located between the first and second tubular sections.

USE/ADVANTAGE - For camshafts etc., enabling use of different materials of the shaft **parts**.

ABEQ DE 8901100 G UPAB: 19930923

The **hollow** shaft (1) with integral drive **members** consists of **separate**, tubular first sections (5) joined to second tubular sections (2,3) with integral cams (2). The two types of the tubular sections are formed by **plastic** moulding of the one into the elastically deformable other one, or by shrinking the one onto the other one.

An intermediate layer (11), made of a material with a high modulus of elasticity is located between the first and second tubular sections.

USE/ADVANTAGE - For camshafts etc., enabling use of different materials of the shaft **parts**.

ABEQ EP 324500 B UPAB: 19930923

A **hollow** shaft (1) having drive elements (2, 3) and consisting of individual tubular first portions (5) which are connected to second portions (2, 3) produced so as to integral with the drive elements, characterised in that the first portions (5) consist of a ductile material, that the second portions (2) are also tubular and consist of a brittle material, that the first portions (5) are inserted into the second portions (2) via overlapping **parts** and that between the overlapping **parts** of the first and second portions (5, 2) there is arranged an intermediate layer (11) consisting of a material with a high modulus of elasticity.

ABEQ US 4967617 A UPAB: 19930923

A **hollow** shaft is composed of individual tube portions and provided with cams and end pieces, the individual tube portions preferably being interconnected by **plastic** expansion of the inner elements and elastic expansion of the outer elements. It is also possible to achieve a connection by shrinking the outer elements onto the inner ones by soldering or welding.

Sleeves interconnecting the drive elements are designed to be integral with them and form **part** of the **hollow** shaft so that considerable weight savings are achieved by avoiding doubled regions where **parts** are slid onto each other.

USE - The design is particularly suitable for connecting **parts** with distinctly different elastic properties such as steel tubes and malleable cast iron drive elements.

AN 1989-208463 [29] WPIX

DC P52 Q51 Q61 Q62 Q63 Q64

IC ICM F16C003-00; F16H053-02

ICS B21D053-84; F01L001-04; F16B004-00; F16C001-04; F16D001-06;  
F16H055-00

L7 ANSWER 37 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1988-286683 [41] WPIX

DOC. NO. CPI: C1988-127201

TITLE: Extruder screw construction - has several longitudinal sections with replaceable sleeves fitting over internal shaft starting behind inlet area.

DERWENT CLASS: A35

INVENTOR(S): KROKSNES, F

PATENT ASSIGNEE(S): (KRPP) KRUPP GMBH FRIED; (KRPP) KRUPP AG FRIED

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3709798	A	19881006	(198841)*		8
DE 3709798	C2	19950223	(199512)		8

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3709798	A	DE 1987-3709798	19870325
DE 3709798	C2	DE 1987-3709798	19870325

PRIORITY APPLN. INFO: DE 1987-3709798 19870325

AN 1988-286683 [41] WPIX

AB DE 3709798 A UPAB: 19930923

A screw, and partic. an extruder screw for processing rubber mixes, plastic etc. is in several parts with an inner shaft and replaceable hollow members which are placed over it to form the parts concerned. The inner shaft has a large outer dia. behind the inlet to the extruder; after the inlet it takes up the torque from the sections of the screw beyond; the section of the screw next to the inlet area is fixed to the screw shaft.

ADVANTAGE - The screw designed can transmit heavy torque even with deeply cut flights. It is suitable for temp. control. It consists entirely of replaceable sections.

0/5

ABEQ DE 3709798 C UPAB: 19950328

A multi-sectional worm, esp. an extruder worm for working rubber mixtures, plastics, etc. includes an inner shaft with individual and exchangeable hollow members formed on it. The inner shaft has a larger dia. w.r.t. the extruder inlet, and the inlet region worm section is fixed to the worm shaft. The worm section associated with the inlet region is pref. screwed onto the shaft.

ADVANTAGE - The worm can transfer a large rotational moment, and the geometry consists of interchangeable worm sections.

Dwg.0/5

AN 1988-286683 [41] WPIX

DC A35

IC B29C045-60; B29C047-60

ICM B29C047-60

ICS B29B007-42; B29C045-60; B29C047-64

MC CPI: A11-A03A; A11-B07

KOROMA EIC1700

PLC UPA 19930924  
KS: 0009 0218 0229 2334 2355 2356 2363

FG: \*001\* 014 03- 032 040 371 392 394 396 415 504

L7 ANSWER 38 OF 55 WPIX (C) 2003 THOMSON DERWENT  
ACCESSION NUMBER: 1988-237193 [34] WPIX  
DOC. NO. NON-CPI: N1988-180227  
TITLE: **Plastics** material window or door frame -  
comprises separately formed **hollow** frame  
**members** in which rigid insert is mounted.  
DERWENT CLASS: Q48  
PATENT ASSIGNEE(S): (SCHO-I) SCHOLES E M H  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2201181	A	19880824	(198834)*		14

# APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2201181	A	GB 1987-4105	19870221

PRIORITY APPLN. INFO: GB 1987-4105 19870221

AN 1988-237193 [34] WPIX

AB GB 2201181 A UPAB: 19930923

The window or door frame made of **plastics** material comprises two separately formed **hollow** frame **members** (10,11), interconnected at right angles to each other. A rigid insert (13) is mounted in a **hollow** portion (14) of a first of the frame **members** and has a base (15) securely attached to a mounting face (16) of a second of the frame **members** (10). The mounting face is defined between an overhanging lip (17) and an upstanding flange (18). The insert is made of **metal** and has a tubular portion (20) which is press-fitted into the **hollow** portion of first frame **member** (11) to form a rigid coupling.

The base (15) is arranged at one end of the tubular portion (20) and has a projecting lip (21) at one end which **fits** under the overhanging lip. An engaging face (22) mates with the upstanding flange (23) of the second frame **member**. A projecting portion (24) extends laterally from the tubular portion and has a bore (25) for receiving a fastening screw (26) taken through the second frame **member** in order to hold-down the base on the mounting face. The engaging face of the insert can cut into the overhanging lip and/or into the upstanding flange (23) as the insert is drawn down onto the mounting face by the fastening screw when there is an unduly tight **fit**.

USE - Window or door frame which is reinforced to ensure correct seating of glazing unit.

2/3

AN 1988-237193 [34] WPIX  
DC Q48  
IC E06B003-96

L7 ANSWER 39 OF 55 WPIX (C) 2003 THOMSON DERWENT  
ACCESSION NUMBER: 1987-102041 [15] WPIX  
DOC. NO. NON-CPI: N1987-076711  
TITLE: Reinforcing rod anchorage for concrete structure - has  
two hollow metal supports with hooks  
attached, separated by corrugated intermediate  
plastics member.  
DERWENT CLASS: Q43 Q44 Q46  
PATENT ASSIGNEE(S): (TILE-I) TILETSCHKE L  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3535294	A	19870409	(198715)*		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3535294	A	DE 1985-3535294	19851003

PRIORITY APPLN. INFO: DE 1985-3535294 19851003

AN 1987-102041 [15] WPIX  
AB DE 3535294 A UPAB: 19930922

The insert for embedding in concrete, acting as an anchorage for reinforcing rods between e.g. two members between which the concrete is poured, has two hollow members (2) made of steel, from which hooked rods (6) project. They are vertical and parallel, and separated by a shaped intermediate plastics element (4). This element can be corrugated, with e.g. triangular or trapezium shaped folds.

Each side of the intermediate element is a part (3) shaped as a cover, which fits inside a hollow member (2). In alternative designs, the corrugated port can be made of overlapping strips extending from top to bottom. They can be connected by spot welds, staples or adhesive. Each cover (3) has V-shaped inwardly extending edges (5).

USE/ADVANTAGE - Reinforcing rods anchoring in bulding. The positioning of the insert ensures that all forces are transmitted evenly by the reinforcing wires.

2/7

AN 1987-102041 [15] WPIX  
DC Q43 Q44 Q46  
IC E04B001-41; E04C005-16; E04G015-06



L7 ANSWER 40 OF 55 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 1987-021455 [03] WPIX  
 DOC. NO. NON-CPI: N1987-016251  
 TITLE: Paper drilling machine - has sleeve fitted in  
 collet of machine spindle and configured to receive one  
 end of hollow cutting bit.  
 DERWENT CLASS: P54  
 INVENTOR(S): BURNS, R J  
 PATENT ASSIGNEE(S): (DEXT-N) DEXTER-LAWSON PROD  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4632611	A	19861230	(198703)*		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4632611	A	US 1984-604665	19840427

PRIORITY APPLN. INFO: US 1984-604665 19840427

AN 1987-021455 [03] WPIX

AB US 4632611 A UPAB: 19930922

The machine includes a drill made of two **separate parts**, namely a cutting bit of **hollow** cylindrical form having an annular cutting edge at one end, and a **hollow** cylindrical sleeve. The sleeve receives the opposite end portion of the bit and is itself received in a collet assembly of a drill spindle of the machine.

The sleeve is radially compressible and is compressed by the collet assembly to frictionally grip the bit. This permits transmissions of drilling torque from the drill spindle to the bit in use.

USE - A drilling machines for forming a series of holes in a stack of paper or the like in a single operation. Other applications of machines of this type are for forming holes in **plastics**, film, chip board, rubber, cloth, etc.

2/5

AN 1987-021455 [03] WPIX

DC P54

IC B23B051-04

L7 ANSWER 41 OF 55 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 1986-286761 [44] WPIX  
 DOC. NO. NON-CPI: N1986-214183  
 TITLE: Two part **hollow** frame member for window - has  
**plastics** zones of parts positioned to form  
 thermal break when parts joined by threaded fastener.  
 DERWENT CLASS: Q48  
 INVENTOR(S): COVENTRY, E K  
 PATENT ASSIGNEE(S): (BRIG-I) BRIGGS L G

COUNTRY COUNT: 1

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2174134	A	19861029	(198644)*		5
GB 2174134	B	19881012	(198841)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2174134	A	GB 1985-10041	19850419

PRIORITY APPLN. INFO: GB 1985-10041 19850419

AN 1986-286761 [44] WPIX

AB GB 2174134 A UPAB: 19930922

The frame comprises a number of frame members which are joined together, at least one of the frame members (2) being a two part hollow frame member which is formed in two **separate parts** (4,6). The two **separate parts** are joined together along lengthwise surfaces of the two **separate parts** by a screw threaded fixing member (8) which screws into a longitudinally extending boss (10) formed inside the two part hollow frame members.

The two **separate parts** are each provided with a **plastics** material (46). The **plastics** material is so positioned that when the two **separate parts** are joined together, the **plastics** material forms a longitudinally extending thermal break.

3/4

ABEQ GB 2174134 B UPAB: 19930922

A window frame comprising a plurality of frame members which are joined together, at least one of the frame members being a two part hollow frame member which is formed in two **separate parts**, the two **separate parts** being joined together along lengthwise surfaces of the two **separate parts** by screw threaded fixing means which screw into a longitudinally extending boss formed inside the hollow frame member, the two **separate parts** each being provided with a **plastics** material, and the **plastics** material being so positioned that when the two **separate parts** are joined together the **plastics** material forms a longitudinally extending thermal break which is positioned between the hollow portion of the hollow frame member and a remaining portion of the hollow frame member.

AN 1986-286761 [44] WPIX

DC Q48

IC E06B001-32

DRN 1514-U; 1543-U; 1761-U; 1767-U

L7 ANSWER 42 OF 55 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 1985-191278 [32] WPIX  
 DOC. NO. NON-CPI: N1985-143519  
 TITLE: Composite sealing strip for car door opening - has reinforced cushioned outer section **interlocking** with curved edge section with internal flange.  
 DERWENT CLASS: Q17 Q48 Q65  
 INVENTOR(S): KRUSHWITZ, W; KRUSCHWITZ, W  
 PATENT ASSIGNEE(S): (DRAF) DRAFTEX GMBH; (DRAF) DRAFTEX IND LTD  
 COUNTRY COUNT: 8  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3501195	A	19850801	(198532)*		9
GB 2153420	A	19850821	(198534)		
GB 2153421	A	19850821	(198534)		
FR 2558916	A	19850802	(198537)		
US 4614347	A	19860930	(198642)		
GB 2153421	B	19870812	(198732)		
CA 1237747	A	19880607	(198827)		
IT 1201216	B	19890127	(199120)		
DE 3501195	C2	19950427	(199521)		4

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3501195	A	DE 1983-3501119	19830116
GB 2153420	A	GB 1984-2138	19840127
GB 2153421	A	GB 1984-2139	19840127
US 4614347	A	US 1984-673169	19841119
DE 3501195	C2	DE 1985-3501195	19850116

PRIORITY APPLN. INFO: GB 1984-2139 19840127

AN 1985-191278 [32] WPIX

AB DE 3501195 A UPAB: 19930925

The sealing strip for **fitting** round a vehicle door opening, made in inner and outer sheets (8.10) includes a support (14) for the outside and sealing element (16) **interlocking** with it so that they both form a U section enclosing the raw edges (12). The support has a soft **hollow part** (22) projecting outwards, forming a buffer for the door.

The support also incorporates a reinforcing strip (20) underneath the **hollow part**. It has projecting arm (18) shaped to form a groove (24) to hold a 'T'-shaped projection (30) inside the sealing element.

ADVANTAGE - The strip is suitable for automatic assembly.

2/2

ABEQ GB 2153421 B UPAB: 19930925

A trimming and sealing strip assembly for mounting on a flanged joint

running at least partly around a door opening in a vehicle body, comprising first and second **separate** elongated **parts** each of generally 'L'-shape in cross-section which are mechanically **interlocked** together to define a generally channel shape in use which embraces the flanged joint, the first **part** presenting a surface which faces towards a surface of the flanged joint on the outside of the vehicle body and which is secured thereto by adhesive and presenting another surface facing in the opposite direction and on which is mounted a soft and resilient seal, the said second **part** being adapted to hinge relative to the first **part** about an axis parallel to the elongate direction so as to resiliently cover the edge of, and to secure, a lining terminating adjacent the flanged joint on the inside of the vehicle body.

ABEQ US 4614347 A UPAB: 19930925

The trimming and sealing strip assembly is mounted on a flanged joint running at least partly around a door opening in a vehicle body. Two **separate** elongated **parts** of resilient material are each L-shape in cross-section and are mechanically **interlocked** together to define a channel-shape which embraces the flanged joint.

The first **part** presents a surface which faces towards a surface of the flanged joint on the outside of the vehicle body and which is secured to it by adhesive and presents another surface facing in the opposite direction and on which is mounted a soft and resilient seal. The second **part** hinges relative to the first **part** about an axis parallel to the elongate direction so as to cover the edge of, and to secure, a lining terminating adjacent the flanged joint on the inside of the vehicle body.

USE - Partic. in motor vehicle body construction.

ABEQ DE 3501195 C UPAB: 19950602

One (14) of the two **parts** is bonded to one side of the fixed flange (12) and both **parts** (14,16) are locked together (24,30) where they overlap. **Part** (14) is made of flexible material to act as flexible joint in the locking action. The cladding (32) of the body is drawn in between **part** (16) and the far side of the flange.

**Part** (14) takes the sealing element (22) in its outward surface and this same **part** (14) has an embedded reinforcing strip (20). Typically the **part** (14) consists of hard rubber or **plastics** with embedded **metal** strip, using a seal made partially of foam material, seal and the **part** (15) bearing surface (18) being doubly extruded. The **part** is held to the flange by means of an extended bonding strip (26), suitably exposed on installation to fix to the **part** (14).

USE/ADVANTAGE - Motor vehicles, rim seals. Two **part** seal is held securely to rim area by flange/groove and **interlock** between the two **parts**, e.g. for door openings, etc.

Dwg.2/2

AN 1985-191278 [32] WPIX

DC Q17 Q48 Q65

IC B60R013-06; E06B007-23; F16J015-12

L7 ANSWER 43 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1985-039271 [07] WPIX

DOC. NO. NON-CPI: N1985-029224  
 TITLE: Container for storing magnetic tape cassettes in e.g. vehicle - has light source, reflecting rear and optically-conducting **plastic parts** for use in dark.  
 DERWENT CLASS: Q32 Q34 T03 W04  
 INVENTOR(S): STROMIEDEL, K  
 PATENT ASSIGNEE(S): (FISA) FISCHER FA ARTUR  
 COUNTRY COUNT: 13  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 132533	A	19850213	(198507)*	GE	11
R: AT BE CH FR GB IT LI NL SE					
AU 8429007	A	19850207	(198513)		
DE 3338518	A	19850502	(198519)		
DK 8403550	A	19850123	(198529)		
HU 39529	T	19860929	(198645)		
EP 132533	B	19881109	(198845)	GE	
R: AT BE CH FR GB IT LI NL SE					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 132533	A	EP 1984-105978	19840525
DE 3338518	A	DE 1983-3338518	19831022

PRIORITY APPLN. INFO: DE 1983-3326465 19830722; DE 1983-3338518 19831022

AN 1985-039271 [07] WPIX

AB EP 132533 A UPAB: 19930925

The container has one or more boxes consisting of wall **parts** forming a rectangular **hollow** body and a slide comprising a front **fitting** into the **hollow** body. The slide holds a cassette. The rear of the container is a reflector with a light source. The wall **parts** are made of optically-conducting **plastic**. The reflector forms the rear of the container and may be a light-coloured, pref. white **plastic** injection moulded **part**.

The light source is connected to the electrical supply that supplies the instrument panel's lighting if the container is installed in a vehicle. The rear of the container may be a grid with slit-like openings. The light source may consist of grid-like optically-conducting rods running along **plastic** wall **parts**.

ADVANTAGE - Allows the user to find and operate the slide to remove a cassette even in the dark.

1/5

ABEQ EP 132533 B UPAB: 19930925

Container having one or more **individual** boxes which comprise

wall parts forming a rectangular hollow body and a slider member which has a front face fitting into the hollow body and which holds a magnetic tape cassette, characterised in that there is arranged at the rear face of the container a reflector provided with a source of light, and the wall parts are manufactured from a light-transmitting plastics material.

AN 1985-039271 [07] WPIX  
 DC Q32 Q34 T03 W04  
 IC B65D085-67; G11B023-02  
 MC EPI: T03-L; T03-N03; W04-L

L7 ANSWER 44 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1983-A7071K [03] WPIX

DOC. NO. NON-CPI: N1983-009268

TITLE: Toner cartridge for photocopier - has thin walled container with plug ends and with tear-off strip over dispensing slot.

DERWENT CLASS: P84 Q33 S06

INVENTOR(S): KASHIWAGI, H; YAMASHITA, K

PATENT ASSIGNEE(S): (HITK) HITACHI METALS LTD

COUNTRY COUNT: 2

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3223275	A	19830105	(198303)*		13
US 4441636	A	19840410	(198417)		
DE 3223275	C	19870709	(198727)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3223275	A	DE 1982-3223275	19820622
US 4441636	A	US 1982-390645	19820621

PRIORITY APPLN. INFO: JP 1981-97059 19810623

AN 1983-A7071K [03] WPIX

AB DE 3223275 A UPAB: 19930925

The cartridge has a thin cylinder (1) of non-magnetic material and is sealed at one end by a plastic plug with a recessed moulding. This fits over a locating stub in the copier. The other end is fitted with a second plastic plug (7) inside whose recess is a grip bar (8). The toner is dispensed inside the copier through a tear-off strip (3) along one side of the cylinder.

The cartridge is fitted into the copier after the strip is removed, and with the dispensing slot upwards. The plugs are shaped to seal against the opening in the copier and the cartridge is rotated, by gripping the grip bar, to turn the slot downwards and release the toner.

2/7

ABEQ DE 3223275 C UPAB: 19930925

The toner cartridge includes a cylindrical hollow body (1) of non-magnetic material with a toner supply slot, opening, recess or similar (10) in its circumferential wall. A first end sealing part (4) is arranged with a projection (9) in a part of its periphery, and this can be brought in to a locked engagement with the slot (10). The first end seal (14) has a flange (6).

The second end sealing part (5) has a toner supply opening closed by a stopper (13), constructed of thin metallic sheet, with a bent or folded back part (11), to make a gap with a small radial width between the bent or folded part (11) and the outer circumferential surface of the second sealing part (5). The other end of the hollow body (1) is inserted in this gap and fixed at the second sealing part (5).

USE/ADVANTAGE - Electro-photocopier. No separate rotational part is required. Despite this a simple mechanical assembly and fitting of the cartridge is ensured.

ABEQ US 4441636 A UPAB: 19930925

The cartridge has a non-magnetic cylindrical hollow body serving as a container formed at its outer peripheral surface with a toner feeding slot extending lengthwise. A lid is attached to one end of the hollow body and is formed at the outer peripheral surface of its end portion with a flange. A second lid is attached to the other end of the hollow body and is formed at its bottom with a toner supply port. A cap closes the toner supply port, and a seal that can be peeled off closes the toner feeding slot formed at the outer peripheral surface of the hollow body.

The second lid is formed of thin sheet metal by bending at its outer peripheral edge portion in a manner to provide a minuscule clearance between a bent portion and the thin sheet metal. The hollow body is inserted at the other end in the bent portion and is secured in place. The hollow body is formed at its outer peripheral surface with a groove and the first lid is formed at its outer periphery with a projection, so that the projection can be brought into locking engagement in the groove when the first lid member is attached to the hollow body.

AN 1983-A7071K [03] WPIX  
DC P84 Q33 S06  
IC B65D047-10; G03G015-08  
MC EPI: S06-A04A

L7 ANSWER 45 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1982-G6984E [23] WPIX

TITLE: Motor vehicle roof structure - has tubular trim bar in three sections, connected by plastics connectors of different sizes for length adjustment.

DERWENT CLASS: Q17 Q22

INVENTOR(S): TOSHOH, M; YOATANI, K

PATENT ASSIGNEE(S): (KATO-N) KATO HATSUJO KAISHA LTD; (NSMO) NISSAN MOTOR CO LTD

COUNTRY COUNT: 3

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3143555	A	19820603	(198223)*		18
GB 2089304	A		(198225)		
GB 2089304	B	19840502	(198418)		
US 4461509	A	19840724	(198432)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2089304	A	GB 1981-32815	19811030
US 4461509	A	US 1981-317328	19811102

PRIORITY APPLN. INFO: JP 1980-157768U 19801104

AN 1982-G6984E [23] WPIX

AB DE 3143555 A UPAB: 19930915

The roof trim carrier bar (11) is a tube with a slot (12) along its length. The bar is so shaped that its end fits in holes in the roof side rail. It is made in three sections, a straight central one (11a) and two bent end sections (11b,11c) to fit the shape of the roof.

The three sections are linked by plastics connectors (13) which fit into the hollow tube with ribs which fit in the tube slot and central divider sections. The length of the bar can be adjusted by using the central section of different length, or by using connectors with differently sized divider sections. The bar can be made in two sections with a single connector.

3

ABEQ GB 2089304 B UPAB: 19930915

A roof structure for an automotive vehicle, including: a roof panel provided at an upper portion of the automotive vehicle; a roof rail fixed at the opposite side edges of the roof panel in a longitudinal direction of the automotive vehicle; a support member fixed at both ends thereof to the roof rail along the roof panel; a head lining supported by the support member in a suspension form; the improvement comprising: the support member including a main part and two side parts placed at the opposite ends of the main part; the main part being separate from both two side parts; the support member being made of a hollow pipe; the support member having a slit in its longitudinal direction; a joint member for joining the side parts to the opposite ends of the main part so that the support member is formed in an assembled form as a unit; the joint member having an insertion portion and a rib formed thereon in a longitudinal direction of the joint member; the insertion portion being inserted into a joint end of the main part and a joint end of the side parts; the rib being positioned in and engaging the slit of the support member.

ABEQ US 4461509 A UPAB: 19930915

The roof structure for an automotive vehicle includes a roof panel, a roof



rail, a head lining and a support. The support is divided into three parts, a main part and two side parts. The main part is separate from at least one side part. The main part may be separate from one side part and formed integrally with the other side part

The main part may be separate from both side parts. Each side part is fixed to the roof rail. The side part or parts are joined to the main part by means of a joint member. The joint member may include an insertion portion and a rib formed on it, or a central separation portion disposed along the outer circumferential surface.

ADVANTAGE - The whole length of the support for the head lining can be easily adjusted.

AN 1982-G6984E [23] WPIX  
DC Q17 Q22  
IC B60R013-00; B62D025-06

L7 ANSWER 46 OF 55 WPIX (C) 2003 THOMSON DERWENT  
ACCESSION NUMBER: 1979-L5297B [50] WPIX  
TITLE: Resilient cylindrical joint for sheet glass - has  
plastics tube divided into hollow  
compartments with slotted walls to grip sheets.  
DERWENT CLASS: Q43 Q46 Q61  
PATENT ASSIGNEE(S): (WALT-I) WALTON J M  
COUNTRY COUNT: 7  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 5962	A	19791212	(197950)*	EN	
R: BE DE FR GB LU NL					
US 4291512	A	19810929	(198142)		
EP 5962	B	19820602	(198223)	EN	
R: BE DE FR GB LU NL					
DE 2962987	G	19820722	(198230)		

PRIORITY APPLN. INFO: GB 1978-23134 19780526

AN 1979-L5297B [50] WPIX  
AB EP 5962 B UPAB: 19930901

The hollow, e.g. moulded plastic, body (2) can be of round, square or rectangular cross-section and is divided longitudinally by at least one, pref. integral, internal wall (3), which may be flat or curved. Compartments (4, 5, 8) are thus formed, at least two of which have outer walls formed by the body wall.

A slot (6) is provided in the outer wall of each compartment, pref. with a contoured edge e.g. tongue and groove or mating corrugations, to receive and grip the edge of the sheet (7, 9) being joined or supported which is typically plastics or glass. Portions at the ends of the joint (1) may be made without internal walls to facilitate compounding

of joints, pref. by **separate** connecting **members** (10),  
to form structures.

The joint is for horticultural or agricultural use, for construction of cold frames, compost containers or garden dividers. The joint may instead be used for a display stand. Stacking and compounding of joints is easily accomplished using rods or separate connectors so that, e.g. a compost container or cold frame can be easily extended when required.

AN 1979-L5297B [50] WPIX  
DC Q43 Q46 Q61  
IC E04B001-00; E04H017-20; F16B005-06; F16B007-04

L7 ANSWER 47 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1979-K8546B [47] WPIX

TITLE: Securely fixed strip handle for kitchen cupboard doors - has positive engagement between grip and fixing strip for long life.

DERWENT CLASS: P25

INVENTOR(S): KRIESCHE, E

PATENT ASSIGNEE(S): (MIEL) MIELE & CIE

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2820347	A	19791115	(197947)*		

PRIORITY APPLN. INFO: DE 1977-738145 19780503; DE 1978-2820347  
19780510

AN 1979-K8546B [47] WPIX

AB DE 2820347 A UPAB: 19930901

The strip handle (4) for a kitchen cupboard door has two side **parts** each with a non-bending **hollow** core (8) having an outer foamed **plastics** cover (9). A **separate metal** or **plastics** grip **member** (7) is designed to be inserted flush between the side **parts** of the strip at any point.

On at least one end (17) is a push-in connector (18) to connect up with the adjoining side **part** (5, 6). This connector matches the cross-sectional shape of the cavity (13) of the core so as to positively engage in it when **fitting** the handle. This secure hold between the grip and the adjoining side **parts** of the strip does not loosen during use and provides a neat finished appearance.

AN 1979-K8546B [47] WPIX

DC P25

IC A47B095-02

L7 ANSWER 48 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1978-G0011A [31] WPIX

TITLE: Spiral staircase with multi-piece handrail - has **plastics** connecting tubes mounted on banisters by inclined sockets.

DERWENT CLASS: Q45  
 INVENTOR(S): PEDLEY, N V  
 PATENT ASSIGNEE(S): (PEDL-N) PEDLEY WOODWORK LTD  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 1519768	A	19780802	(197831)*		

PRIORITY APPLN. INFO: GB 1974-48960 19741112

AN 1978-G0011A [31] WPIX

AB GB 1519768 A UPAB: 19930901

The spiral staircase has a handrail (2) which consists of **separate** rigid elongate **members** (18) each mounted respectively on a banister (4) which extends upwards from a stair tread (6). Each member has at each end an annular hole and is attached by a flexible connection (22) to an adjacent member.

The connection may be a **hollow plastics** tube connected to a member by insertion in the annular hole in one end. Each member is mounted on a banister by a socket or hole which is set at such an angle that the member is inclined with respect to the horizontal.

AN 1978-G0011A [31] WPIX

DC Q45

IC E04F011-18

L7 ANSWER 49 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1976-53460X [28] WPIX

TITLE: Insulated upper parts for transportation units - by separately moulding units forming bottom-side walls, and roof unit.

DERWENT CLASS: A32 A95 Q15 Q22 Q37

PATENT ASSIGNEE(S): (KAWA-I) KAWAMATA T H

COUNTRY COUNT: 9

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
NL 7514518	A	19760625	(197628)*		
DE 2558300	A	19760729	(197632)		
SE 7514433	A	19760830	(197638)		
JP 51095467	A	19760821	(197640)		
FR 2295825	A	19760827	(197645)		
ZA 7507942	A	19770622	(197735)		
US 4093173	A	19780606	(197831)		
CH 603482	A	19780815	(197837)		
IT 1056379	B	19820130	(198215)		

PRIORITY APPLN. INFO: BR 1974-10738 19741223

AN 1976-53460X [28] WPIX

AB NL 7514518 A UPAB: 19930901

Insulated or cooling upper parts for transportation units, e.g. motor-lorries, trailers, and railway wagons, are produced in two **separate parts**, i.e. a single, dimensionally-stable main unit forming the bottom, and side-walls, and a roof or cover unit. These units are each produced with two separate **moulds** having the required shape, size and other characteristics, and are then combined to form a dimension ally-stable upper part. Both units consists essentially of a **hollow shell** of a synthetic resin filled with fibre-glass, and are filled with a rigid polyurethane foam contg. fibre-glass. The units are joined together by an adhesive based on a synthetic resin contg. fibre-glass. Simpler, cheaper and more rational prodn. than conventional methods involving prodn. and assembly of separate panels. After assembly of the two units the resulting upper part is strong, light and dimensionally stable.

AN 1976-53460X [28] WPIX

DC A32 A95 Q15 Q22 Q37

IC B29D003-02; B29D012-00; B29D027-00; B62D029-04; B62D065-00; B65J001-02

MC CPI: A11-B09A; A12-S02A; A12-S08; A12-T04

PLC UPA 19930924

FG: \*001\* 012 03- 04- 150 308 309 42& 441 446 448 456 46& 491 50- 541 542  
609 617 672 723

L7 ANSWER 50 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1976-L1589X [47] WPIX

TITLE: Double paned sliding window mounting frame - with panes mounted on **hollow** supports by **plastic** angle sections.

DERWENT CLASS: Q48

PATENT ASSIGNEE(S): (FATY-I) FATYGA J

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CH 580743	A	19761015	(197647)*		

PRIORITY APPLN. INFO: CH 1974-6115 19740506

AN 1976-L1589X [47] WPIX

AB CH 580743 A UPAB: 19930901

The mounting frame for a sliding window employs two longitudinally **separate members** (7, 8) which are **hollow** sections formed by folding metal sheet and joined via profiles of **plastic** material which fix via a series of longitudinal mortices and tenons. Each of two interspaced panes (3, 4) are mounted on supports (7, 8) via separate **plastic** angle sections (5, 6) with mastic retention, and each angle section (5, 6) mortices onto its resp support with one section (6) extending down between supports to form a knife edge

seal (6a). An external **plastic** angle (9) on a wooden sub-sill (10) houses the lower edge of the exterior support member (7), and a tongue (11) projecting down from between the supports (7, 8) bears on the leg of a further angle section (12) which is fixed within the major external angle (9) to form a further seal.

AN 1976-L1589X [47] WPIX  
DC Q48  
IC E06B003-26

L7 ANSWER 51 OF 55 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1975-L3458W [42] WPIX

TITLE: Stylus unit for groove tracking or cutting devices - comprises stylus holder of reinforced **plastic** containing magnetic element.

DERWENT CLASS: T03 V06 W04

PATENT ASSIGNEE(S): (PHIG) PHILIPS GLOEILAMPENFAB NV

COUNTRY COUNT: 12

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2512527	A	19751009	(197542)*		
BE 827346	A	19750929	(197542)		
NL 7404360	A	19751003	(197542)		
DK 7501311	A	19751124	(197552)		
FR 2266252	A	19751128	(197603)		
BR 7501889	A	19760106	(197604)		
DE 2512527	B	19760226	(197610)		
CH 591136	A	19770915	(197741)		
AT 7502421	A	19771115	(197748)		
US 4068850	A	19780117	(197805)		
GB 1501237	A	19780215	(197807)		
NL 156526	B	19780417	(197817)		
CA 1035286	A	19780725	(197832)		
IT 1030479	B	19790330	(197926)		

PRIORITY APPLN. INFO: NL 1974-4360 19740401

AN 1975-L3458W [42] WPIX

AB DE 2512527 B UPAB: 19930831

The stylus assembly for use in groove tracking or cutting equipment comprises a holder of reinforced **plastic** with the stylus on one end and an enlarged **hollow** section at the other. A magnetic element **fits** into the main **part hollow** section, while a **separate** smaller **hollow** space receives a grid wire. Preferably, both magnetic element and grid wire are fastened in by adhesive or by being bedded in, the grid wire also being preferably of reinforced **plastic**. Reinforcement is preferably provided by carbon wires, boron wires or silicon whiskers. The magnetic element can be of either soft or hard magnetic type.

AN 1975-L3458W [42] WPIX

DC T03 V06 W04  
IC G11B003-46; H04R001-16

L7 ANSWER 52 OF 55 WPIX (C) 2003 THOMSON DERWENT  
ACCESSION NUMBER: 1973-44391U [32] WPIX  
TITLE: Automobile tyre studs - by ultrasonically incorporating  
metal rods into hollow plastic/rubber  
body.  
DERWENT CLASS: A95 Q11  
PATENT ASSIGNEE(S): (SZE-I) SZEPESVARY J GEMESI G  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2202373	A		(197332)*		

PRIORITY APPLN. INFO: DE 1972-2202373 19720119

AN 1973-44391U [32] WPIX

AB DE 2202373 A UPAB: 19930831

Studs for automobile tyres are produced by (a) forming the stud body with continuous hollow space in the axial direction for receiving a metal rod by injection moulding, compression moulding or extruding a thermoplastic resin, thermosetting resin or elastomer, and (b) incorporating the metal rod in the body by use of ultrasonic vibrations, or, when the body consists of several parts, combining the separate parts around the metal rod by ultrasonic vibrations. Lower weight than metal studs. Less noise, damage to roads, and damage to tyres. The studs can be produced rapidly and economically.

AN 1973-44391U [32] WPIX

DC A95 Q11

IC B29D031-00; B60C011-16

MC CPI: A12-T01

PLC UPA 19930924

FG: \*001\* 012 03- 032 04- 231 246 308 354 359 41& 415 42& 450 456 458 461  
473 672 696 723

L7 ANSWER 53 OF 55 JAPIO COPYRIGHT 2003 JPO

ACCESSION NUMBER: 1999-309785 JAPIO

TITLE: METHOD AND APPARATUS FOR PRODUCING PLASTIC  
TUBE CONTAINER

INVENTOR: ASAKURA SOUICHIRO

PATENT ASSIGNEE(S): DAIWA CAN CO LTD

PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 11309785	A	19991109	Heisei	B29D023-00

APPLICATION INFORMATION

STN FORMAT: JP 1998-134507 19980428  
ORIGINAL: JP10134507 Heisei  
PRIORITY APPLN. INFO.: JP 1998-134507 19980428  
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
Applications, Vol. 1999

AN 1999-309785 JAPIO

AB PROBLEM TO BE SOLVED: To easily return cylindrical parts largely deformed from a circular cross section to a circular cross-sectional state before applying printing or coating to the cylindrical parts each becoming the body part of a plastic tube container in the production of the tube container without requiring labor or an apparatus for arranging the directions of the individual cylindrical parts and damaging the outer surfaces of the cylindrical parts.

SOLUTION: In a plastic tube container producing method having a printing/ coating process for a cylindrical part 10 applying desired printing or coating to the outer surface of the cylindrical part 10 in such a state that a mandrel is inserted into the hollow part of the cylindrical part becoming the body part of a plastic tube container, the cylindrical part 10 becoming the body part of the plastic tube container is heated to 70±5°C by heaters 3 while supported by each of the pins 12 of an endless chain 1 fitted with pins to be fed before printing or coating is applied to the cylindrical part to return the cylindrical part 10 deformed from a circular cross section to a circular cross-sectional state.

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IC ICM B29D023-00  
ICS B29C035-10

L7 ANSWER 54 OF 55 RAPRA COPYRIGHT 2003 RAPRA

ACCESSION NUMBER: R:537293 RAPRA  
FILE SEGMENT: Rapra Abstracts  
TITLE: METHOD AND APPARATUS FOR PRODUCING MULTI-COLOUR SHELLS  
UTILISING AN INDEXING DIVIDER MOULD.  
INVENTOR: Gray J D  
PATENT ASSIGNEE: Davidson Textron Inc.  
CORPORATE ADDRESS: Dover, New Hampshire, USA  
PATENT INFORMATION: US 5316715 A 19940531  
APPLICATION INFORMATION: US 1992-881724 19920508  
DOCUMENT TYPE: Patent  
LANGUAGE: English

AN R:537293 RAPRA

AB An apparatus and process for manufacturing multiple thin walled hollow shells for parts such as automobile door panels, arm rests, and instrument panels from thermoplastic plastisol includes a pair of plastisol charge boxes each forming a separate compartment and members for joining the charge boxes with an open ended mould. The mould has a divider rib thereon that is inaccessible by straight vertical engagement of a seal assembly

on the divider. An indexable divider wall is operatively connected between the charge boxes so that the divider wall can be selectively extended and retracted at an angle with respect to the vertical and against the mould at the divider rib thereon for allowing separation of the casting surfaces having different colours fixed thereon and the subsequent fusing of the casting surfaces to one another at the divider.

AN R:537293 RAPRA FS Rapra Abstracts  
 ICM B29C039-12  
 ICS B29C041-18  
 CC 83; 63Tr.Ro; 6123  
 SC \*OB; QN; SD  
 CT APPARATUS; ARM REST; AUTOMOTIVE APPLICATION; COMPANY; DIAGRAM; DIVIDER WALL; DOOR PANEL; **HOLLOW ARTICLE**; INSTRUMENT PANEL; MACHINERY; MANUFACTURE; MOULD; MOULDING; MULTI-COLOUR; **MULTI-COLOUR MOULD**; **PLASTIC**; PLASTISOL; SHELL; TECHNICAL; **THERMOPLASTIC**; THIN-WALLED; **MOLD**; MOLDING; MULTI-COLOR; **MULTI-COLOR MOLD**  
 SHR AUTOMOTIVE APPLICATIONS,moulding,hollow parts; MOULDING, hollow parts,automotive applications  
 CA Dover, New Hampshire, USA  
 GT USA

L7 ANSWER 55 OF 55 PASCAL COPYRIGHT 2003 INIST-CNRS. ALL RIGHTS RESERVED.  
 ACCESSION NUMBER: 2001-0166784 PASCAL  
 COPYRIGHT NOTICE: Copyright .COPYRGT. 2001 INIST-CNRS. All rights reserved.  
 TITLE (IN ENGLISH): Investigation into the influence of processing conditions of the gas-assisted injection molding process  
 AUTHOR: ONG N. S.; OH W. T.  
 CORPORATE SOURCE: School of Mechanical and Production Engineering, Nanyang Technological University, Nanyang Avenue, Singapore 639798, Singapore  
 SOURCE: Journal of injection molding technology, (2000), 4(4), 191-200, 9 refs.  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: United States  
 LANGUAGE: English  
 AVAILABILITY: INIST-26665, 354000094187250040

AN 2001-0166784 PASCAL  
 CP Copyright .COPYRGT. 2001 INIST-CNRS. All rights reserved.  
 AB Gas-assisted injection molding (GAIM) has been developed for production of **hollow plastic parts** and for **parts** having **separate** internal void spaces or channels. It offers a cost-effective means of producing large parts having a good surface finish, reduced part weight, and relatively short cycle time. The present study involved investigating the effect of various gas assist injection molding processing parameters on the gas bubble length, residual wall thickness (RWT), and the degree of fingering. All are important part quality characteristics that can lead to premature failure



of a part produced by the GAIM process. A single variable experimental method was employed for the study. Four processing parameters were investigated, namely, shot size, gas injection delay time, gas pressure, and melt temperature. Four different mold geometries, each with a different gas channel cross-sectional area, were utilized in the study.

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CC 001D10A04A2A; Applied sciences; Polymer technology, Materials science  
CCFR 001D10A04A2A; Sciences appliquees; Technologie des polymeres, Science des matériaux  
CCES 001D10A04A2A; Ciencias aplicadas; Tecnologia de los polimeros, Ciencia de los materiales  
CT **Thermoplastics**; Styrene polymer; Injection molding; Processing parameter; Gas injection; Pressure effect; Temperature effect; Geometrical shape; Headwater channel; Fingering; Experimental study  
CTFR Thermoplastique; Styrene polymere; Moulage injection; Condition mise en oeuvre; Injection gaz; Effet pression; Effet temperature; Forme geometrique; Canal amenee; Digitation; Etude experimentale; Moulage injection assiste gaz; Longueur penetration gaz; Epaisseur paroi residuelle  
CTES Termoplastica; Estireno polimero; Moldeo por inyeccion; Condicion puesta en ejecucion; Inyeccion gas; Efecto presion; Efecto temperatura; Forma geometrica; Canal aduccion; Digitacion; Estudio experimental